

COMMISSION 27 OF THE I. A. U.  
INFORMATION BULLETIN ON VARIABLE STARS

Number 3028

Konkoly Observatory  
Budapest  
1 June, 1987  
HU ISSN 0374-0676

PHOTOELECTRIC PHOTOMETRY OF HD 33798

The star HD 33798 (=SAO 40158, = BD +47 1117) is listed as a 7th magnitude, G5 star in *The Henry Draper Catalogue*. HD 33798 was listed as a suspected variable by Fekel and Hall (1985) with chromospheric activity given as a possible mechanism for its variability. This star was observed 39 times with the 0.4 meter telescope at the University of Northern Iowa (UNI) Hillside Observatory during the winter and spring of 1987. We used a STARLIGHT-1 photon counting photometer. A standard V filter was used for all 39 observations. SAO 40213 (= BD +46 993), a G5, 8.1 magnitude star was used as a comparison.

Observations at UNI have revealed a maximum change in brightness in HD 33798 of 0.07m. The behavior appears to be periodic. A visual examination of the data led us to suspect a period of between 9.6 and 9.9 days. Folding the data produced the best agreement when a period of 9.8 days was chosen. We invite interpretations of our data.

The obtained differential magnitudes in the sense HD 33798 - SAO 40213 are given in Table 1 and Figure 1. A phase diagram, assuming a 9.8 day period, is shown in Figure 2.

Table 1

J.D. 2446000+	$\Delta V$
804.5404	-.7621
811.6102	-.8138
814.6167	-.7604
819.5724	-.7909

Figure 1

## HD 33798 VISUAL FILTER

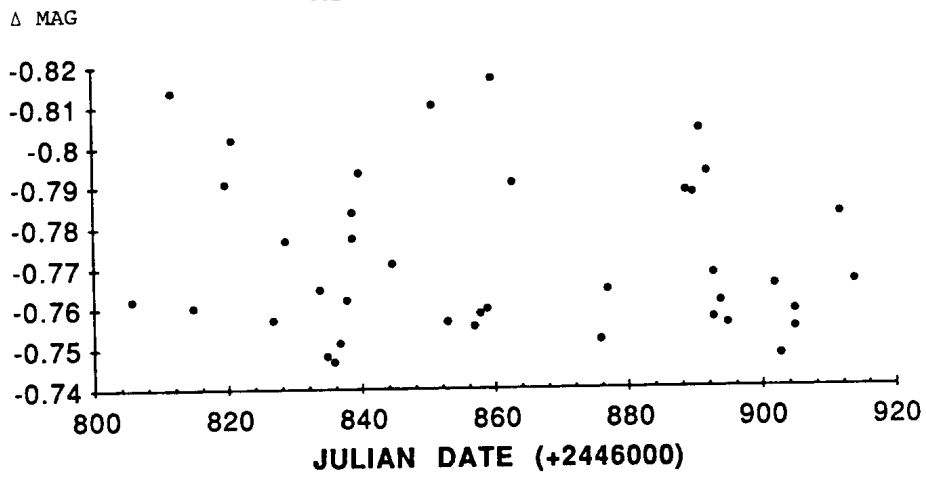


Figure 2

## HD 33798 PHASE (ASSUMING 9.8 DAY PERIOD)

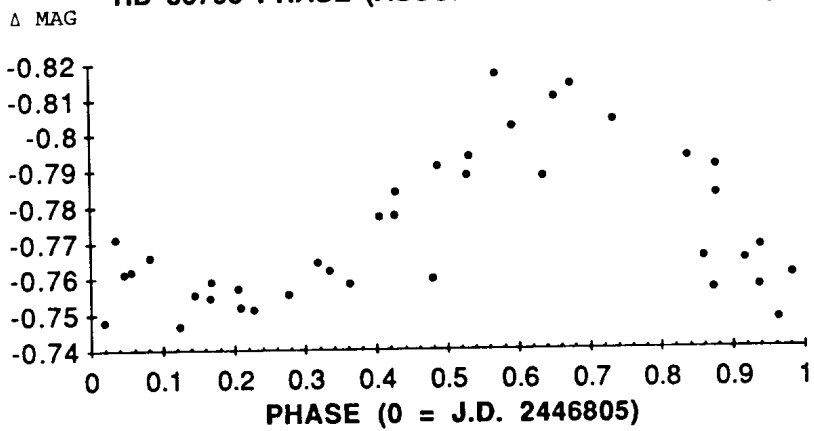


Table 1 (Continued)

820.6084	-.8020
826.6085	-.7573
828.5692	-.7769
833.5713	-.7646
834.5735	-.7482
835.6154	-.7467
836.6278	-.7514
837.6736	-.7620
838.5812	-.7774
838.5936	-.7838
839.6052	-.7935
844.5406	-.7711
850.5778	-.8103
852.7471	-.7566
856.7133	-.7555
857.5473	-.7585
858.6878	-.7599
859.5745	-.8168
862.5888	-.7908
875.6461	-.7521
876.7089	-.7643
888.5735	-.7885
889.5735	-.7881
890.5956	-.8038
891.5995	-.7932
892.5807	-.7573
892.5948	-.7682
893.6459	-.7613
894.6117	-.7556
901.6125	-.7654
902.6280	-.7481
904.6267	-.7546
904.6417	-.7590
911.5988	-.7829
913.6018	-.7661

AARON J. SPURR

DARREL B. HOFF

Hillside Observatory  
 University of Northern Iowa  
 Cedar Falls, Iowa 50614  
 USA

## References:

- Cannon, A.J. and Pickering, E. C., 1918, The Henry Draper Catalogue: The Astronomical Observatory of Harvard College, Cambridge, p. 96.
- Fekel, F.C. and Hall, D.S., 1985, Forty Suspected Variable Stars, I.A.P.P., Comm. No. 20, June, p. 37-40.